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ABSTRACT

The aim of this study was to examines the effects of life-span contextual variation on father-child relationships. Sixty families in which both parents were either younger than 26 or older than 29 when they began childbearing, and whose oldest or only child was between the ages of 3 and 5 at the time of the study participated. Questionnaires were administered to fathers, assessing their conceptualizations of child development, identification with social and parental roles, time spent with children, marital satisfaction, and job satisfaction, work-home compatibility, and social network attributes. Videotaped observations of father-child play were also collected. Older fathers established stronger connections to extra-familial contexts, displayed more complex conceptualizations of child development, and relied more upon verbal mechanisms to engage children during play than younger fathers. Younger fathers were more strongly tied to kin, maintained a more traditional style of fathering, and engaged their children through physical stimulation more than older fathers. Older fathers' more perspectivistic, verbal style is likely to be more cognitively stimulating, and may stimulate faster cognitive advances and subsequent academic success in their children. The children of younger men, on the other hand, should benefit from heightened affective arousal of their style of play. Contains 67 references. (Author/MDM)

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Waiting for Paternity: An Observational Study of the Timing of Fatherhood

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Abstract

The aim of this study was to examine the effects of life-span contextual variation on father-child relationships. Sixty families in which both parents were either younger than 26 or older than 29 when they began childbearing, and whose child was between the ages of 3 and 5 at the time of the study participated. Questionnaires were administered to fathers, assessing their conceptualizations of child development, identification with social and parental roles, time spent with children, marital satisfaction, and job satisfaction, work-home compatibility, and social network attributes. Videotaped observations of father-child play were also collected. Older fathers established stronger connections to extra-familial contexts; they displayed more complex conceptualizations of child development and relied more upon verbal mechanisms to engage children during play. Younger fathers were more strongly tied to kin; they maintained a more traditional style of fathering, and engaged their children through physical stimulation. The implications of these findings for models of father-child relationships were explored.

Waiting for Paternity: An Observational Study of the Timing of Fatherhood

Demographers have documented that an increasing number of parents are choosing to delay childbearing. Between 1970 and 1981 the rate of first births among (white) women in their thirties has doubled, and is positively associated with the educational and occupational status of the women and the tendency to delay marriage (Baldwin & Nord, 1984; Bloom, 1984; Bloom & Trussell, 1984; Rindfuss & St. John, 1983; Teachman & Polonko, 1985; Wilkie, 1981). A systematic comparison of families who have delayed childbirth to those who have chosen normative timing provides the opportunity to study the contextual effects of occupational status, marital relationships, and social networks attributes (given that a combination of raised age and occupational status should increase the likelihood that delayed families will be more geographically mobile) on family relations (cf., Belsky, 1984). This study will focus on father-child relations, as relatively little is known about them compared to mother-child relations. Each of these issues will be briefly examined.

Work-Family Connections

Delayed fathers have described themselves to be in more stable work situations than early-timing fathers, to be more experienced workers, and have their jobs and careers more firmly established than early-timing peers (Daniels & Weingarten, 1982). They should also be more satisfied with their jobs, as job satisfaction has been found to be positively associated with age until mid-life (Kalleberg & Loscocco, 1983), and less likely to experience the "life cycle squeeze," during which one's ability to generate income has not yet progressed as fast as the need for income with the introduction of children (Rodman & Safilios-Rothschild, 1983). The financial strains associated with early career status, therefore, may be more likely to create conflict between the work and family demands of early/normal-timing fathers than delayed-timing fathers.

The work of fathers has been found to both support and intefere with their family relationships. Studies have shown the amount of time fathers work to be associated with less instrumentally and emotionally involvement with his child (Crouter, Perry-Jenkins, Huston, & McHale, 1987; McHale & Huston, 1984; Reppetti, 1989), and observations of anxiety in children and irritability in fathers during father-child interaction (Cowan & Cowan, 1985; Heath, 1977). Alternately, support by co-workers of parental responsibilities, job satisfaction and involvement have been linked to more stimulating and responsive father-infant interaction (Volling & Belsky, 1991); positive parenting attitudes, such as authoritative style and demand for maturity (Greenberger & Goldberg, 1989); and fathers' support of their five-year-old children's autonomy and affiliation attempts (Grossman, Pollack, & Golding, 1988); respectively.

The literature suggested that delayed fathers should be in a better position than early fathers to control the conflict between their

work and family roles, which Voydanoff (1988) has found to mitigate work-family conflict and, therefore, display less disruption in their relationships with their children. Although work flexibility has not been found to influence the amount of father participation in family work (Barnett & Baruch, 1987), it may be that the quality of the father-child relationship is the critical factor. It was further expected that delayed fathers will be more satisfied with their jobs, and that less work-home conflict will leave them free to identify more strongly with the parental role than the early fathers. Early fathers are expected to work longer hours due to greater financial strain and less schedule flexibility.

Social Network Attributes

Social networks of parents have been posited to influence child development and the transition to parenthood (Cochran & Brassard, 1979; Power & Parke, 1984). Among mothers, satisfaction with support from family and friends has been linked to more positive ratings of parent-child interaction (Brassard, 1982; Cotterall, 1986; Crnic, Greenberg, & Slough, 1983; Crockenberg, 1981) and to be positively associated with both cognitive and social development in children (see Zarling, Hirsch, & Landry, 1988).

Studies which have examined the association between fathers' involvement with their children and social network attributes have found the issue to be influenced by the employment status of mothers. Within single-earner families men were found to play less with their children if a local female kin network existed and if their social ties were predominantly with men (Riley, 1985). In dual-earner families, men's involvement in routine child-care was greater if they had access to multiply-supportive bonds with friends, especially other parents from whom they could gain childrearing advice, and if work did not conflict with home life. Moreover, fathers who reported low levels of advice fathers were more likely to get it from nuclear kin, while the high-advice group was more likely to use neighbors. Significant positive correlations were found between use of non-kin and salience of the parental role, educational status, and occupational status (Riley & Cochran, 1985).

Given that delayed fathers have been found to be more likely to be in dual-earner families and less attached to nuclear families, their social networks should reflect those fathers in Riley's studies. Indeed, among mothers, late timers have reported relying on emotional support of friends during the early years of parenting more frequently than early timers, and reported it to be more important to them than early timers (Walter, 1986). Early timers reported relying heavily on parents for child-rearing and emotional guidance, and on extended family for general emotional support. The late timers in this study tended to be geographically removed from their parents, leading them to develop a more heterogeneous social network to cope with parenting stressors.

The available evidence suggests that the social network attributes of delayed and early fathers should differ. Delayed fathers are expected to be less reliant on kin for support, and have broader access

to friendship networks. Access to a broader array of network members and more frequent use of these people for child-care support and advice was predicted for delayed versus early fathers. These attributes should encourage and support more frequent and higher quality involvement of fathers with their children.

Marital Relationships

Research has clearly supported the hypothesis that marital relationships influence parent-child relationships, but differently for mothers and fathers (e.g., Belsky, Rovine & Fish, 1989; Dickstein & Parke, 1988; Goldberg & Easterbrooks, 1984; Levy-Shiff & Israelashvili, 1988; Volling & Belsky, 1991). Specifically, paternal involvement has been found to be positively associated with marital satisfaction.

A positive linear association between age and marital stability happiness through age 30 has been found by a number of studies (Booth & Edwards, 1985; Carlson & Stinson, 1982; Vanden Heuvel, 1988). It was expected that delayed fathers will be in more satisfied and stable marriages than early fathers, which should, in turn, support higher levels of father involvement in child-care and well-functioning father-child relationships.

Father-Child Relationships

We turn now to the studies which have directly examined the effects of age on father-child relationships. Retrospective accounts by adults who were the first-born children of older parents report that having older parents was an important influence in their lives. Many reported having felt especially appreciated by their parents (Yarrow, 1991) and described fathers who were between the ages 30 and 39 when the respondent was born as more accepting than fathers who were younger or older (Finley, Janovetz, & Rogers, 1990). Parents' retrospective accounts of parenting have also been found to vary with timing. Both mothers and fathers have reported that delayed fathers are more interested than younger first-time fathers in parenting, and they are more likely to engage in caretaking with their children (Bloom-Feshbach, 1979; Daniels & Weingarten, 1982). Delayed mothers have also reported being more psychologically ready to take on the responsibility for raising a child and attaining more satisfaction with parenting (Daniels & Weingarten, 1982; Ragozin, Basham, Crnic, Greenberg, and Robinson, 1982; Walter, 1986). Although it is unknown whether delayed fathers share these feelings, their reports of increased involvement suggests that they do.

Father-child play has been found to be an important context for children to learn skills which are important in their social development (Parke, MacDonald, Burks, Carson, Bhavnagri, Barth, & Beitel, 1989; MacDonald and Parke, 1984). MacDonald and Parke (1986) found that older parents reported playing physically with their children less often than did younger parents. Moreover, Neville and Parke (1987) found older parents to likely to engage in more cognitively advanced with children and to report holding their children more than younger fathers. Thus, as also found by Zaslow, Pedersen, Suwalsky, Rabinovich, and Cain

(1985), older fathers may be less tied to stereotypic paternal behavior, adopting styles more similar to those that have been considered traditionally maternal.

Few studies have reported observations of parent-child interaction across parental age. In a naturalistic observations of first-time fathers with their infants at three and nine months, Volling and Belsky (1991) found the older fathers to be more responsive, stimulating and affectionate at both time points. By contrast, age was unrelated to self-reports of fathers taking responsibility for child care in this study.

Among mothers, observational analyses of the impact of timing have revealed a number of effects, such as positive associations with skills in cognitive and behavioral stimulation, tolerance for frustration, mother-child play, behavioral elicitation, time commitment, and skills in coping with adversity (Cotterall, 1986; Ragozin et al., 1982). A critical distinction has been found between the chronological age versus age at first birth among mothers. Whereas age-at-first-birth was positively associated with supportive maternal behavior, chronological age was negatively associated with rates of positive behaviors (Conger, McCarty, Yang, Lahey, and Burgess, 1984; Ragozin et al., 1982).

The available studies support the position that the parent-child relations in delayed families differ from those in earlier-timed families. Observations were expected to support previous self-report studies that found delayed fathers to be less apt to be as physically playful as younger, non-delayed fathers, but to rely on more cognitively stimulating interactional patterns. Given the expectation that more delayed fathers than early fathers would be in dual-career families, the results are expected to support Zaslow et al.'s (1985) finding that the parenting style of delayed fathers should be less "traditionally paternal" than single-earner fathers.

Method

Subjects

Sixty families, solicited through newspaper advertisements and promotional flyers placed in day-care centers, participated in the study. Only families with two parents and an oldest or only (biological) child between the ages of 3 and 5 were included. There were two groups of families: "early" parents, those in which both parents were within the age range of 19 and 25 (mean age: 23.1) when the child was born; and "delayed" parents, those who were 30 and older (mean age: 34.3). The ages of the delayed group were selected because of the increase in the number of couples who are beginning childbearing within this age range, whereas the early group actually represent the modal timing of first-births (Baldwin & Nord, 1984). Families with parents whose ages fell between these groups were eliminated to highlight the effects of timing of childbirth. Parents younger than 19 were eliminated because of the circumstances and problems which distinguish teenage parents from all others. Approximately equal numbers of male

and female children were recruited within each parental group, with 14 father-boy pairs in both the early and delayed groups, 17 early-father-girl pairs, and 15 delayed-father-girl pairs.

The average salary of these men was just over $20,000 per year, with all but four of them earning between $8,000 and $40,000 per year. All but one early father had completed high school, and nearly 40% had completed four years of college or beyond. The mean age at marriage was 21.6 and the average length of the marriage at first birth was 19 months. Only one early father had been previously married.

The mean age of the delayed fathers was 34.3. The delayed fathers were found to have completed more years of education than the early group (see Table 1), with all but four of these fathers having completed college and most having additional graduate

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Insert Table 1 about here

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course work or degrees. Delayed families were also found to be at a higher level of socioeconomic status (using the Hollingshead Four Factor Index) and income than the early fathers. Their mean annual salary was over $30,000, with all but four making at least $20,000. The mean age at marriage for delayed fathers was 28 years, and the average length of marriage at first birth was over five-and-one-half years. Five of these men had been previously married.

No differences were found in mean number of children in each family, the number of previous marriages by fathers, nor in fathers' reports of children's time in day-care. As expected, the wives of the delayed fathers were more likely to be employed than those of the early fathers (Pearson Chi Squared=4.79; $p<.05$).

Measures

Aspects of the work, marital, and social network circumstances of these families were assessed to examine the impact of contextual variation on father-child relationships of early and delayed fathers. Each father was administered a general demographic information form containing questions regarding age, gender, occupation, income, education, etc. Two measures of one's attitudes regarding employment status were administered. First, the Job Description Index -- Work Scale (JDI; Smith, Kendall, & Hulin, 1969), an extensively used measure of satisfaction with work. Smith et al. reported good internal consistency (split-half correlations corrected by Spearman-Brown formula: 0.84), and moderate test-retest correlations indicating responsiveness to situational factors; a Cronbach's alpha of .86 was obtained in the current sample. Second, the Work-Home Compatibility Index, which is a measure constructed for this project in which participants rate the degree of conflict between the demands of work and home in a number of domains. The items were designed to result in scales representing respondents' perceptions of (1) work's interference with family (WIWF; Cronbach's alpha = .90), (2) family's interference with work (FIWW; Cronbach's alpha = .70), and (3) family help with work (FHWW; Cronbach's alpha = .74).

Fathers' marital satisfaction was measured using the Locke-Wallace marital adjustment test (Locke & Wallace, 1959). The MAT was chosen because it is a widely used instrument in the marital literature, which has been found to distinguish between distressed and well-functioning marriages with good reliability (split-half correlations corrected by Spearman-Brown formula: 0.90) (Locke & Wallace, 1959).

Fathers' social networks were measured by asking fathers to create a list of (up to) twenty "significant and important" people in their lives. Each father could list as few or many (up to 20) members as was thought accurate. The following descriptors of each member of the list were obtained: (1) fathers' relation to each member; (2) frequency of contact; (3) types of support received from the member (chosen from: general advice, emotional support, physical help, and recreation); (4) types of child-oriented support received (chosen from: talk generally to person about child, child-rearing advice, physical help, help with specific child-oriented problems); and (5) ratings on a seven-point scale of satisfaction with each relationship.

To assess the importance of various social roles in fathers' lives, fathers' were asked to divide their lives into social roles and assign weights to each role according to its relative importance. They were then asked to further sub-divide the parental role by assigning relative weights to each parental role. This measure was adapted from a similar technique used by Cowan and Cowan (1990), who report test-retest reliability coefficients of .92 to .94 for role endorsements.

Lastly, the Child-Care Diary was given to each father. Fathers (or their wives) were asked to log each time the father engaged in an activity with their child, distinguishing between one-on-one time and with mother also present. The beginning and ending time of the activity was recorded under one of three categories of activities: recreation, caregiving, and household chores. Activities were recorded on two days, one during the work week and one during a non-working day.

Procedure

Upon arrival to the play room a brief explanation of the procedure was given to the father and child, and the father was taken to an adjoining room to complete the questionnaires while the child stayed in the play room with a research assistant.

After the questionnaires were completed, which typically took about 30 minutes, fathers were asked to return to the play room. The room was minimally furnished (one upholstered couch and chair, and a thickly padded carpet) to maximize the need for the dyad to interact. After an initial fifteen-minute warm-up period, the father and child were asked to play for ten minutes in a physical manner and the examples of wrestling, tumbling and tickling were provided. The session was video-taped using two remote controlled cameras placed in corner-mounted shadow-boxes which were painted black to minimize the obtrusiveness of the otherwise visible cameras.

Physical play was chosen because it is a common form of father-child play (Parke, 1979). It is an activity which is relatively free of external goals, which may constrain interactions to facilitate the

completion of some task, thus highlighting the dyad's interactional style. Physical play has also been found to be an important context for parental socialization of children (Parke et al., 1989).

Following the play sessions the fathers were escorted to the adjoining room again and the Social Network List was administered. During this time the child was left in the play room with a research assistant. Finally, the father was asked to take home the Child-Care Diary and log all interactions with the child on two "average" days, one during the work week and one during the weekend, and mail the forms back to the lab. Forty-six of the sixty families returned the diaries. All families were paid $25.00 for their participation.

Coding of Father-child Interactions. Qualitative aspects of father-child relationships were assessed via global and microanalytic coding of videotaped observations of a father-child play session. The videotapes of the play session were coded in two ways: (1) using a "bout" analysis and (2) global ratings of dyadic interactional style. The bout analysis allowed play sessions to be divided into separable play segments. A typical example would be playing "horsey" or "tag." This system focused on documenting the length of the time engaged in play bouts as a measure of the dyad's general interactional skill. Other studies have found the length of father-child bouts to be positively associated with children's popularity among school peers (see Parke et al., 1989).

Four undergraduate assistants, who were blind to the hypotheses of the study, were trained to code for play bouts until each attained an agreement score (kappa) of 0.8 or greater. Each of the four coders coded twenty-five percent of the tapes. Twenty percent of each of their tapes were re-coded by the author, and reliability was again assessed using the kappa coefficient. Score sheets were compared on a second-by-second basis and simple presence or absence of a bout was examined, resulting in a mean kappa of 0.75.

The global ratings allow a broader characterization of dyads' interactional style. Each coder viewed play sessions which had previously been divided into play bouts by another coder. Ratings were made for both father and child during each bout on the following dimensions: affective tone, amount of verbal interaction, and bids for control. In addition dyadic cooperation, parental stimulation, and child arousal were also rated. The mean value on these codes across bouts represents the overall level of affect, arousal, etc., of the participants while playing. To assess inter-rater agreement, correlations were calculated between the author's mean code across bouts and those of each of the undergraduate coders for each global code, with values ranging from .74 to .86, except for father affect, which was .37 and was eliminated from further analyses, and dyad cooperation, which was .55 and was included but should be viewed with caution.

Results

It has been proposed that understanding the contextual correlates of the timing of childbirth is essential to understanding timing effects on family relations. Differences between timing groups in each contextual domain will be examined first, followed by an examination of the connections of these contextual factors to father-child interaction.

Preliminary Analyses

Due to the finding that the two groups differ on age, education, income and socioeconomic status, these variables were entered into a principal components analysis to explore the inter-relationships between these variables for each group of fathers. Of concern was the possibility that group differences in subsequent analyses would simply reflect these simple demographic differences. The goal of the analysis was to determine if SES alone could be used as a covariate in future analyses, or if other covariates were needed to minimize the chance that group differences on other variables would act as stand-ins for social status differences.

Using eigenvalues greater than one to select component solutions, the analyses revealed different component solutions for the two groups. Among the early fathers a two-component solution was found, whereas among the delayed fathers a one component solution was found. Examination of the loadings for each variables on the two solutions (see Table 2) indicated that the income was relatively unrelated to the other demographic variables among early, but not among delayed fathers. Such a finding is not

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Insert Table 2 about here

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surprising if one considers (1) how socioeconomic status was computed and (2) career income trajectories. SES was computed using the Hollingshead (1975) combination of ratings of job prestige scores and years of education. An early father could have a prestigious job with a college education, but receive a similar income to a man who has a less prestigious job, less education, but more years on the job. Most of the delayed fathers, however, would have had the time to establish their careers, and education and prestige would serve as better predictors of income. It was decided that to control for social status differences, and therefore obtain a clearer picture of the nature of any other group differences, both the SES and income would be used as covariates in subsequent analyses.

Of particular concern in this study was the possibility that each contextual variable was nothing more than a marker for socioeconomic status of the groups. Before moving to the main analyses of the study, the associations between the demographic and main contextual variables will be examined to determine the extent to which the measurements of each context represent separable phenomena. To explore the relationship between these variables a canonical correlation was computed for each group of fathers. Education, SES, and salary were entered as one set of

variables, and job satisfaction, marital satisfaction, work-home conflict, and percent of family in network as the other. For both groups two canonical variates explain most of the variance in the analyses (see Table 3) and suggest overlap in the variance of the two sets of variables. In the early group the first two

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Insert Table 3 about here

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canonical variables of the social status variables account for 13.1% of the variance of the predictor variables. In the delayed group the first two canonical variables account for 27.3% of the variance of the predictor variables. Clearly, social status accounts for an important portion of the variance of the predictor variables, but much remains unexplained. As a result, it was decided that the demographic variables should not be construed as simply a marker for the three main contextual factors in this study, but analyses would be performed using SES and salary as covariates. Education was not entered as a covariate because the SES variable was constructed by combining education and occupational prestige (Hollingshead, 1975).

We will next compare the early and delayed fathers on each of the contextual factors. For each comparison multivariate and univariate analyses of variance will first be reported. Because of the previously reported group difference on SES and salary, and the finding that they do not represent a single underlying component in the early group, analyses of covariance will also be reported, controlling for these variables in an attempt to determine which timing group effects can and cannot be accounted for by social status effects.

Work Connections

It was expected that early and delayed fathers would differ in their connections to work in three ways: first, delayed fathers were expected to be more satisfied than early fathers with their work; they were expected to experience less conflict than early fathers between the demands of work and family, and to work fewer hours than the early fathers. A multivariate analysis including job satisfaction and work-home conflict was not performed due to their lack of association (r = -.01), as was also true of work-home conflict and work hours (r = .03).

Job satisfaction. An ANOVA was computed to test for group and child-gender effects on the JDI satisfaction scale. A significant main effect for timing group was found, $F(1,55) = 6.61$, $p<.02$, supporting the hypothesis that delayed fathers were more satisfied with their jobs (see Table 4 for means and standard deviations). When the analysis was recomputed entering SES and salary as covariates, however, no significant differences were

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Insert Table 4 about here

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found, indicating that differences can be accounted for by the social

status differences between the groups, rather than timing of birth, per se.

Work-home compatibility. Contrary to expectations, no difference was found in the time demands of work, as indexed by fathers' reports of the number of hours worked each week (see Table 4). To explore their perceptions of the connections between their work and family demands, the work interference with family (WIWF), family interference with work (FIWW), and family help with work (FHWW) scales of the Work-home Compatibility Index were analyzed as the primary markers of fathers' perceptions of the connections between work and family using a MANOVA. Although no significant effects were found by the MANOVA, when SES and salary were entered as covariates in a MANCOVA, the timing-by-child-gender interaction was significant, Hotelling's $F(3,47) = 3.43$, $p<.05$. The follow-up univariate statistics revealed that younger fathers of girls (mean, sd = 19.1, 7.0) and older fathers of boys (means, sd = 20.7, 5.3) reported more interference by work in family life than older fathers of girls (mean, sd = 23.4, 5.5) and younger fathers of boys (mean, sd = 22.9, 6.8), $F(1,49) = 5.44$, $p<.05$.

Social Networks

Delayed fathers were expected to have a greater proportion of non-kin in their networks and to rely on them for general and child-related support more than early fathers. A MANOVA was computed to examine the effects of timing status and child gender on the density of social networks, and the size of the kin and non-kin sub-networks. This analysis was followed by a MANCOVA, with SES and salary entered as the covariates. No significant group differences were found in the size of the networks or the overall density of the networks, with respondents reporting an average of 6.3 non-kin and 4.8 kin in their networks. The overall mean density of their networks was .60.

Examination of the distributions of descriptors of the network relationships revealed that they were not normally distributed and that data transformations (square roots) also did not correct the problem. Therefore, categorical analyses were used, following transformation of the variables into binary form by performing a median split of each variable. Hierarchical loglinear analyses were chosen to investigate differences in the relationships between the timing groups and the families with male versus female children. Separate analyses were computed for kin and non-kin on each network descriptor: frequency of contact, satisfaction with relationship; general support via (1) advice, (2) physical help, (3) emotional support, and (4) problem solving; and child-related support via (1) general discussion, (2) physical support, (3) advice, and (4) problem solving.

Stronger connections were expected between the early group and their kin network, and between the delayed group and their non-kin networks. No differences were found in the groups' connections to either network in contact frequency and satisfaction, nor among the four general support descriptors by either network. Differences in the

expected directions were found, however, in child-related support. Delayed fathers reported that they talked to more non-kin about their children than early fathers (Likelihood Ratio Chi Squared = 5.38, $p<.05$), although no differences were found in more direct forms of childcare or other social supports from non-kin. Early fathers were found to seek physical help with child care from more family than delayed fathers (Likelihood Ratio Chi Squared = 6.32, $p<.05$). The asymmetrical log-linear model which best represented the relationship between the seeking of childcare advice from kin, paternal timing-status, and sex-of-child was the three-way interaction of these variables (Likelihood Ratio Chi Squared Change = 4.07, $p<.05$). Two-way models were not found to differ significantly from the saturated model. Thus, the early and delayed fathers' reports of child-care advice-seeking from kin differed depending on whether they had boys or girls. Examination of the cell counts suggests that early fathers were more inclined to seek advice with boys than with girls, whereas the delayed fathers' advice seeking was not influenced by child gender. In addition, it was also found that all fathers sought physical help from more kin when they had boys than when they had girls (Likelihood Ratio Chi Squared = 4.83, $p<.05$).

The findings support the assertion that stronger connections would be found between delayed fathers and non-kin, and between early fathers and kin networks; although this pattern of connections was limited to childcare issues.

Marital Connection

The next contextual variable to be examined is marriage. Marital satisfaction, age at marriage, and length of marriage were expected to be higher among the delayed fathers. A MANOVA was computed testing for differences in age at marriage, length of marriage, and marital satisfaction. A significant main effect for timing status was found (Hotelling's $F(3,53) = 37.93$, $p<.001$). The timing group effect remained significant when a MANCOVA, controlling for SES and salary, was computed, Hotelling's $F(3,47) = 17.64$, $p<.001$, indicating that the effect can not be accounted for by social status differences. To further explore this effect a discriminant analysis was performed to highlight the linear combination of marital variables which optimally discriminates the pattern of the early and delayed fathers. Table 5 displays the standardized discriminant function coefficients and the correlation between discriminating variables and the canonical

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Insert Table 5 about here

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discriminant function. The discriminant function accounts for just under 70 percent of the variance explained by group differences (Wilk's Lambda = .32; Chi squared[3] = 64.80; $p<.05$). The values indicate that being older at the time of marriage and having longer marriages were the best discriminators between the delayed fathers and the early fathers (see Table 6 for means and standard deviations). Marital satisfaction contributed little in

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Insert Table 6 about here

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discriminating between these two groups. The discriminant analysis correctly classified 96.7% of the cases.

Social Roles

Identification with the parental role was expected to be stronger among the delayed fathers than the early fathers. Within that role it was further expected that endorsement of the caregiver role would be stronger by the delayed fathers, and endorsement of the disciplinarian role would be stronger by the early fathers. A series of hierarchical loglinear analyses were performed, due to the failure of the data to conform to the normal distribution, testing the effects of timing and sex-of-child on endorsement of each social role (as defined in the "Who I Am" questionnaire), and with each parental role.

The results failed to support the expectation that identification with the parental role would be stronger among delayed than early fathers. Delayed fathers, however, were found to identify more strongly than early fathers with the worker role (Likelihood Ratio Chi Squared = 6.34, $p<.05$), although no differences were found in endorsement of the breadwinner parental role. It was also found that fathers of boys in both timing groups were less likely to endorse the spouse role than fathers of girls (Likelihood Ratio Chi Squared = 3.94, $p<.05$).

As expected, early and delayed fathers were found to differ in their identifications with the disciplinarian and caregiver parental roles. Early fathers endorsed the disciplinarian role more strongly than delayed fathers (Likelihood Ratio Chi Squared = 7.67, $p<.01$). Partial support was found for the prediction that delayed fathers would display stronger endorsement of the caregiver role. Although both groups of fathers endorsed this role similarly when they had female children, a timing-by-child-gender interaction indicated that it is with male children that delayed fathers were more likely than early fathers to endorse this role. The asymmetrical log-linear model which best represented the relationship between the endorsement of the caregiver role, paternal timing-status, and sex-of-child was the three-way interaction of these variables (Likelihood Ratio Chi Squared Change = 4.41, $p<.05$). Two-way models were not found to differ significantly from the saturated model.

Father-child relationships

Diary Data. The first hypothesis tested in this domain was that delayed fathers would be more involved with their children. It had been expected that group differences would be found in child-care, with delayed fathers engaging in more child-care than early fathers. A MANOVA revealed no differences between the early and delayed fathers in reports of time spent with children while engaged in child-care, recreation or household chores. This finding held true in both one-to-one situations and with mothers also involved.

Observational Data. It was expected that delayed fathers would be observed to maintain play bouts longer than early fathers. An ANOVA, testing group and sex-of-child differences on overall length of time engaged in play bouts, revealed no differences between these groups. A main effect for child gender was found, however, indicating that fathers and boys played longer than fathers and girls, $F(1,53) = 5.13$, $p<.05$, although this effect did not remain significant when SES and salary were controlled, $F(1,47) = 3.31$, $p=.07$, indicating that social status differences contributed to the effect.

Early and delayed fathers' play styles were expected to differ such that the early fathers would rely on physical arousal to engage their children, whereas the delayed fathers were expected to rely on more cognitive mechanisms to remain engaged. A MANOVA, testing group and sex-of-child differences in each of the remaining codes, revealed a main effect for timing, Hotelling's $F(8,46) = 2.67$, $p<.05$; the effect remained significant when SES and salary were controlled in a MANCOVA, Hotelling's $F(8,40) = 2.72$, $p<.05$. To further explore this effect a discriminant analysis was performed to identify the linear combination of global ratings which optimally discriminated the pattern of the early and delayed fathers. Table 7 displays the standardized discriminant function coefficients and the

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Insert Table 7 about here

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correlation between discriminating variables and the canonical discriminant function. The discriminant function accounts for just over 30 percent of the variance explained by group differences (Wilk's Lambda = .69; Chi squared(9) = 18.99; $p<.05$). The values supported the hypothesis that early fathers would be more physically engaging and delayed fathers would be more cognitively engaging. The variables that best discriminated early and delayed father-child dyads were father physical arousal and stimulation, father verbalizations and child verbalization and affective tone. As expected, greater physical arousal and less verbal exchange characterized the early dyads, whereas the inverse pattern was true among the delayed father-child dyads. The variables entered into the discriminant analysis correctly classified 77% of the cases, with mismatches evenly divided across groups. The correlations indicated that the ratings of control, cooperation, and child arousal were less important than the other variables in discriminating between the styles of these two groups.

Contextual-Interpersonal Links

A second, exploratory aim of this study was to examine the links between the contexts in which fathers exist and the relationships they develop with their children. Given the differences in context which have been demonstrated between early and delayed fathers, one would expect to find different associations between these factors and the father-child interactions. The stronger connections to non-kin social networks and work by delayed fathers, suggested a model in which the father-child relationships in the delayed group would be more likely

than those in the early group to be influenced by extra-familial sources. To test this model a series of multiple regressions were computed separately for each timing group, with overall bout time as the response variable in each regression. The socioeconomic status of the fathers was entered into the equation first and salary second (due to its relative independence from SES among the early fathers). In one set, the global ratings of the play bouts which were found to most strongly correlate with overall bout time (father verbalizations, child affect and child arousal) were entered as the predictors. In the other set, the contextual variables were the predictors, i.e., work-home conflict, marital satisfaction, and percent of family in their social networks.

The results of the regressions suggest that the parent-child relationships (as indexed by their ability to remain engaged during the play session) among delayed fathers were more likely than those of the early fathers to be influenced by extra-familial factors. Their relationships were also less reliant on the immediate interactional style than those of the early fathers. As can be seen in Table 8, among the early fathers none of the contextual factors predicted bout time, whereas the within-session global ratings of child affect and arousal, and father verbalizations did enter significantly into the equation to predict the dyad's ability to remain engaged beyond the effects of

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Insert Table 8 about here

SES and salary. Conversely, none of the global ratings predicted bout time among the delayed fathers; rather, increases of work-home conflict predicted shortened play time (see Table 9).

Insert Table 9 about here

Discussion

The aim of this study was to examine the effects of life-span contextual variation on father-child relationships. Demographic trends in childbearing, as well as models of the determinants of parenting (Belsky, 1984; Parke, 1988) led to the selection of work, social networks, and marital relations as the focus of the contextual analysis. Differences between early and delayed fathers were found across each of these domains, as well as in the connections between each context and the father-child relationship, although group differences in socioeconomic status played a significant role in these group differences.

Work

The extant literature led to the hypothesis that delayed fathers should have greater flexibility and stability in their employment situations, which should help them to minimize the conflict between the

high demands of starting a career and a family simultaneously. Although delayed fathers have elsewhere been found to have more freedom to limit work pressures spilling over into the family (Daniels & Weingarten, 1982; Voydanoff, 1985), no differences were found between groups in work-home conflict, nor in number of hours worked per week. In fact, the delayed fathers were actually more strongly connected to the work context than early fathers. The work of delayed fathers was more integrated into their lives than early fathers, as evidenced by a stronger identification with the worker role. They reported higher incomes, had attained a higher socioeconomic status, and were more likely to be in dual-earner families than early fathers. They also reported being more satisfied with their jobs than the early fathers, although this effect was primarily due to their socioeconomic status. Thus, rather than choosing to focus more intently on their family, these fathers appeared to choose to tolerate the conflict to pursue their work more fully.

Social Networks

As suggested by previous studies (Leigh, 1982; Walter, 1986), early fathers were found to have stronger ties than delayed fathers to kin, and delayed parents had stronger ties to non-kin, at least regarding childcare issues. Delayed fathers were found to talk about their children to more non-kin than early fathers, whereas early fathers sought physical childcare help from more kin, and were more inclined to go to kin for child-care advice, at least when they had boys. That early fathers were more likely to go to their families for childcare advice when they had boys may be due to the increased likelihood of problematic behavior among boys (Achenbach, Howell, Quay, & Conners, 1991; Rutter & Garmezy; 1983), or to greater investment by early fathers in their relationships with boys over girls, which has previously been found in a general sample of fathers (Parke, Hymel, Power, & Tinsley, 1980). In either event, the data provide limited support for the hypothesis that stronger connections would be found between delayed fathers and non-kin, and early fathers and kin.

This tendency to rely on familial versus non-familial sources of support may be due to several factors. It may be simply a matter of geographical distance from kin, as found by Walter (1986) among mothers, which prompts delayed fathers to look elsewhere. Alternately, it may be that early fathers are more reliant on their families-of-origin due to issues of emotional attachment and development, as well as financial limitations. The current data did not permit explorations of these alternatives. Further research on the development of social networks across the life span is clearly warranted.

An asset of greater access to a broad social network for delayed fathers may lie in the enhanced resources to cope with the stresses inherent to parental responsibilities. A broader array of people with whom to consult when problems arise should help delayed parents to cope with the daily hassles of parenting and any major traumata, as social support studies attest (Brassard, 1982; Crnic, Greenberg, & Slough, 1983; Crockenberg, 1981; Wolf, 1987; Cutrona & Troutman, 1986).

Further, both cognitive and social development in children has been found to be positively associated with the parental access to social support (Zarling, Hirsch, & Landry, 1988). The children of delayed fathers should profit from these connections, providing a margin of protection against both social and cognitive difficulties.

Marital Connection

Numerous studies have found the quality of the marriage to be an important contextual factor in the lives of children (e.g., Belsky, Rovine & Fish, 1989; Dickstein & Parke, 1988; Goldberg & Easterbrooks, 1984; Levy-Shiff & Israelashvili, 1988; Volling & Belsky, 1991). The marital contexts from which early and delayed fathers develop relationships with their children were found to differ. The two groups of fathers were distinguishable primarily by the age at which they were married and the length of the marriage when the first child was born. Marital satisfaction did not discriminate the groups particularly well. Thus, the marriages of the delayed fathers were more firmly established than those of the early fathers, but not necessarily more satisfying at the time of the study. Children of delayed parents may, in the long run, profit from the stability of their parents' relationship; however, in this study it had no detectable influence on the father-child interactions.

Father-Child Relationships

We move now to a comparison of the relationships these two groups of men developed with their children. Three measures were used as markers of the overall investment in and quality of the father-child relationship: identification with the parental role, time spent together, and the ability to remain engaged throughout the play session. Both sets of fathers reported that their identification with the role of parent occupied comparable proportions of their social identities, and that they spent similar number of hours with their children each week. Although these measures indicate equivalent investment in their relationships with their children, they denote little about the quality of the relationship. To gain a qualitative evaluation of the strength of the relationship, the ability of the father and child to remain engaged throughout the ten-minute session was examined. Once again, no differences were found in early and delayed fathers' ability to engage their children. Thus, no evidence was found indicating generally superior father-child relationships by either group. Stylistic differences were found, however, between early and delayed fathers, and could be seen in (1) how they thought about their parental role, (2) in how they thought about children, and (3) their interactional style with their children. These issues will be considered next.

Parental Roles. The delayed fathers displayed less traditional paternal attitudes than early fathers in the strength with which they identified with the disciplinarian and caregiver aspects of the paternal role. Fathers have traditionally adopted the role of disciplinarian in their approach to parenting, tending to leave the caregiving functions

to mothers (Lamb, 1981; Maccoby & Martin, 1983). Delayed fathers endorsed the disciplinarian role less strongly than the early fathers. The delayed fathers were also less likely than the early fathers to discriminate between boys and girls when endorsing the caregiver role. Both groups endorsed the caregiver role at relatively high rates when they had girls, but only the delayed fathers also did so with boys, indicating less stereotypic gender attitudes. These findings support those of Zaslow et al. (1985), who posited that older fathers in dual-career families shift to a more maternal style of parenting. Although timing status and mothers' employment status could not be separated in the current study, the Zaslow et al. study would suggest that mothers's employment status may have played an important role in the current outcome. Future studies should attempt to separate the effects of age from the employment status of spouses.

Father-Child Interaction. A primary aim of this study was to determine if self-reported differences between these groups could also be verified through observations. Indeed, the current study supported and advanced previous studies which have found a self-reported preference among older fathers for less physically arousing and more cognitively advanced play (MacDonald & Parke, 1986; Neville & Parke, 1987). Delayed fathers demonstrated a more cognitively stimulating style of play with their children, which, like their parental role identifications, was also a departure from tradition, at least among American fathers. The early fathers' were observed to engage in more physical arousal, while limiting verbal exchanges, whereas the delayed fathers tended to be more verbally engaging and less physically stimulating with their children. These findings suggest that the previous observationally-based reports (Lamb, 1976; Parke & Power, 1981) of fathers being more physical in their play need to be qualified by the timing of the onset of parenthood.

A likely explanation for this finding is that the delayed fathers were generally less physically active by this age, and less interested in physical activity. It may also be that delayed fathers' communication skills are further developed as a result of general experience, longer marital relationships, and the communication demands of more advanced work. In addition, the fact that these men delayed parenthood connotes a careful, planning-oriented approach to life which may be reflected in more careful planning-oriented play; whereas the early fathers' action-oriented play may also reflect a general action-orientation to life on their part.

Contextual-Interactional Connections

The delayed fathers' relationship with their children were more highly interdependent upon the fathers' broader contextual connections, which leaves them open to both support, such as by child-related discussions with friends, and interference, such as by conflict with work. The relationships of the early fathers and children were more insulated; their childcare support was more restricted to familial sources, and their play was less prone to outside interference and more

focused on their immediate ability to generate an arousing, enjoyable exchange. Given that delayed fathers' connections to work were stronger, it was not surprising that it was primarily among them that work was found to influence the family relationships. Higher levels of work-family conflict were found to be associated with shorter play bouts, supporting previous studies which found work-home conflict to influence the quality of parent-child relationship (Volling & Belsky, 1991). That delayed fathers' relationships were more prone to disruption by work-home conflict suggests that the early fathers' play style was more resistent to extra-familial stress. but also that work-home conflict may be more distressing to the older fathers because their work may be more demanding or more important to them.

Limitations and Implications

Fathers who began parenthood beyond age 30 were found to display stronger connections to the world of work and have achieved a higher level of socioeconomic status. They were less reliant on kin and more open to non-kin regarding childcare. They displayed less traditional paternal attitudes and more complex models of child development than early fathers. Their play styles were observed to be more cognitively, and less physically stimulating than those of early fathers, but also more prone to be disrupted by demands in their lives outside the immediate play setting.

These differences may have long term implications for the children. Older fathers' more perspectivistic, verbal style is likely to be more cognitively stimulating, which has also been found to be true of delayed mothers (Cotterall, 1986), and may stimulate faster cognitive advances and subsequent academic success in their children. Such an outcome would be further supported by the broader array of input regarding children from their social networks, which has also been tied to children's cognitive advancement (Zarling, Hirsch, & Landry, 1988).

The children of the younger men, on the other hand, should benefit from heightened affective arousal of their style of play. Play provides the opportunity to learn emotional regulation mechanisms which facilitate peer relationships (Parke, et al., 1989). The more action-oriented play of younger fathers may provide a richer context in which to learn these skills, and one that may generalize more easily to peer-peer play. They may, however, be at a disadvantage intellectually, as their parents are less likely to present as cognitively stimulating an environment as the delayed parents.

The modest size of the sample may limit the stability of some of the findings, and the ethnic make-up of the sample does not allow generalization beyond a white, middle class population. Also, SES was found to be a contributing factor in employment issues, in fathers' models of child development, and the tendency for fathers and boys to play longer than fathers and girls, suggesting that SES was an important defining characteristic between the groups; although, it does not seem reasonable to attribute group differences exclusively to SES effects.

Future studies should examine older children and adolescents. The role of both fathers and mothers also needs to be addressed in greater

depth in future studies, as no studies published to date have examined both simultaneously. Lastly, individual child level outcomes remain to be explored: the findings suggesting that cognitive and emotional development would be a profitable area to examine.

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Table 1
Means and Standard Deviations of Demographic Variables

		Early	Delayed	t
Education	Mean	15.1	17.8	-4.26*
	SD	(2.6)	(2.3)	
Income	Mean	20.4k	32.4k	-3.11*
	SD	(12.6k)	(15.4k)	
SES	Mean	44.6	61.2	-5.38*
	SD	(14.9)	(7.2)	
Age	Mean	23.1	34.3	
	SD	(1.5)	(5.4)	

*$p < .01$

Table 2
Principal Component Scores for Fathers' Demographic Characteristics

Early Fathers

	Component 1	Component 2
Age	.69	-.18
Education	.90	-.24
SES	.85	.26
Income	.13	.97

Delayed Fathers

	Component 1
Age	.48
Education	.88
SES	.92
Income	.54

Table 3
Canonical Correlations Analysis Between Primary Demographic and Predictor Variables

Early Fathers

Root	r	Cumulative Percent of Variance
1	.48	59.8
2	.37	92.5
3	.19	100

Delayed Fathers

Root	r	Cumulative Percent of Variance
1	.66	70.1
2	.49	98.5
3	.13	100

Table 4
Means and Standard Deviations of Contextual Variables

		Early	Delayed
Job Satisfaction	Mean	43.0	51.6
	SD	(13.3)	(11.1)
Work-Family Conflict	Mean	37.8	37.1
	SD	(8.2)	(6.9)
Weekly Work Hours	Mean	44.1	46.8
	SD	(8.7)	(11.8)
Marital Satisfaction	Mean	104.1	113.6
	SD	(24.9)	(20.0)
Marriage Length (in years)	Mean	5.5	9.7
	SD	(1.6)	(8.7)
Percent of Family in Network	Mean	.52	.43
	SD	(.25)	(.21)

Table 5
Discriminant Function Analysis of Marital Satisfaction, Age at Marriage, and Length of Marriage

	Coeff.*	r**
Marital Satisfaction	-.04	.15
Age at Marriage	.96	.58
Length of Marriage	.92	.50

*Standardized canonical discriminant function coefficient.
**Pooled-within-groups correlations between discriminating variables and canonical discriminant functions.

Table 6
Means and Standard Deviations of Marital Variables

		Early	Delayed
Marital Satisfaction	Mean	104.1	113.3
	SD	(24.5)	(19.7)
Age at Marriage	Mean	21.6	28.7
	SD	(1.6)	(5.5)
Length of Marriage	Mean	5.5	9.6
	SD	(1.6)	(3.6)

Table 7
Play Style Discriminant Function Analysis

Global Code	Coeff.*	r**
Father arousal	1.19	.10
Father stimulation	0.10	.17
Father control	0.22	-.03
Father verbalizations	-0.85	-.41
Child affect	1.56	.24
Child arousal	-2.31	-.02
Child control	0.55	.04
Child verbalizations	-0.42	-.17
Dyad cooperation	0.32	-.01

*Standardized canonical discriminant function coefficient.
**Pooled-within-groups correlations between discriminating variables and canonical discriminant functions.

Table 8

Regression of Contextual Variables and Global Ratings Onto the Overall Length of Play Bouts Among Early Fathers

Variables Entered	b	β	t	R^2	F	df	R^2
Contextual Variables					0.55	6,17	.16
1 SES	-.15	-.03	-.14	.00			
2 Salary	.00	.27	1.22	.06			
3 W-H Conflict	2.09	.23	1.11	.05			
4 Marital Sat.	-.25	-.08	-.38	.01			
5 Family Network	-1.62	-.01	-.02	.00			
Global Play Ratings					15.34**	5,18	.90
1 SES	- .14	-.03	-.14	.00			
2 Salary	.00	.27	1.22	.07			
3 Adult Verb	13.83	.10	.47	.01			
4 Child Arousal	93.02	.79	5.86**	.59**			
5 Child Affect	-112.89	-.73	-3.61**	.14**			

Note. Marital Sat.: Marital Satisfaction. W-H Conflict: Work-Home Conflict. Family Network: Percent of network made up by family. Adult Verb: Adult verbalizations. *$p < .05$. **$p < .01$.

Table 9
Regression of Contextual Variables and Global Ratings Onto the Overall Length of Play Bouts Among Delayed Fathers

Variables Entered	b	β	t	R^2	F	df	R^2
Contextual Factors					3.05*	6,22	.40
1 SES	-6.07	-.36	-1.99	.13			
2 Salary	.00	-.22	-1.10	.04			
3 W-H Conflict	-7.39	-.45	2.62*	.18*			
4 Marital Sat.	-.38	-.06	-.38	.00			
5 Family Network	-152.71	-.28	-1.35	.05			
Global Play Ratings					1.15	5,23	.45
1 SES	-6.07	-.36	-1.99	.13			
2 Salary	.00	-.22	-1.10	.04			
3 Adult Verb	-19.76	-.14	-.73	.02			
4 Child Arousal	26.00	.13	-.66	.01			
5 Child Affect	-18.49	-.08	-.23	.01			

Note. Marital Sat.: Marital Satisfaction. W-H Conflict: Work-Home Conflict. Family Network: Percent of network made up by family. Adult Verb: Adult verbalizations. *$p < .05$. **$p < .01$.